Nematodes:

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| *Transmitted by* ***Ingestion*** *causing* ***Intestinal*** *Infection* | | | | |  |  |  |
| Organism | Reservoir | Vector bitten by/ingested | Infecting Form | Key Sx | Eggs | Pictures | Treatments |
| Enterobius vermicularis (Pin worm) | N/A | Embryonated Eggs | Embryonated Eggs & Adults in Colon | Most common Worm in fection in US; night time perianal pruritis; anorexia, irritability, abdominal pain | Clear cuticle around outside | C:\Users\ccortes\Desktop\Evermicularis_egg_HBa.jpg | Scotch tape test; pyrantel pamoate |
| Trichuris trichuria (Whip Worm) | Embryonated Eggs (3-4 wks to be infectious) | Embryonated Eggs & Adults in cecum | GI Sxs; Anemia w/ blood diarrhea, & tenesmus; Rectal prolapse (complication) | Looks like a football w/ polar plugs | C:\Users\ccortes\Desktop\Trichuris_trichiura_egg1.jpg | Eggs in Feces; Mebendazole |
| Ascaris lumbricoides | Embryonated Eggs (2-4 wk soil incubation) | Embryonated Eggs (Larvae migrate to lungs molt & then adults swallowed) | pneumonitis & liver enlargement; can cause blockage or penetrate intestinal mucosa | Round with thick shell | C:\Users\ccortes\Desktop\Ascaris_egg_fert2_decort_200x.jpg C:\Users\ccortes\Desktop\Ascaris_egg_fert3_embryo_200x.jpg | Eosinophilai & high IgEs; Mebendazole/ Albendazole |

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| *Transmitted by* ***Ingestion*** *causing* ***Tissue****Infection* | | | | |  |  |  |
| Organism | Reservoir | Vector bitten by/ingested | Infecting Form | Key Sx | Eggs | Pictures | Treatments |
| Trichinella spiralis | Pigs/ Wild animal | Ingest larvae in meat | Encysted larvae | 1st wk = GI Sxs; 2nd wk = muscle invasion (myalgia, weakness, malaise); Also can have CNS invasion | Muscle biopsy | C:\Users\ccortes\Desktop\Trichinella_larvaeA.jpg | Eosiniphilia (2nd/3rd wk); Sxs; Wild animal diet; EIA; muscle biopsy; Steriods & mebendazole/ albendazole |
| Dracunculus medinensis (Guinea worm) | Standing pond water | Drinking standing pond water with copepods that have larvae | Copepods with larvae | Female goes to skin (Foot) & creates a blister | N/A | N/A | PAINFUL Blister; worm emergence; slow extraction of worm |

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| *Transmitted by* ***Contact*** *causing* ***Intestinal****Infection* | | | | |  |  |  |
| Organism | Reservoir | Vector bitten by/ingested | Infecting Form | Key Sx | Eggs | Pictures | Treatments |
| Ancylostoma duodenale (Hookworm) | On vegetation (Middle East & Africa) | Filariform larvae penetrate skin (2nd most common human worm) | Filariform larvae (larvae to lungs & swallow; Adults in anterior SI) | Ground itch of skin; pneumonitis; Eosinophilia; IRON DEFICIENCY ANEMIA | Blunty segmented ovoid egg with transparent shell | C:\Users\ccortes\Desktop\Hookworm_egg_wtmt.jpg | Eosinophilia, low ferritin, & high transferrin; Albendazole |
| Necator americanus (Hookworm) | On vegetation (Americas & Australia) |
| Strongiloides stercoralis (Threadworm) | Monkies & Dogs | Filariform larvae; larvae to lungs & swallowed | Larvae; Eggs mature in feces & may autoinfect or have life cycle in soil | Large infection in ICH; Itching skin; pneumonitis; constipation | Rhabditiform larvae in feces | C:\Users\ccortes\Desktop\S_stercoralis_filariform_HB1.jpg | ELISA; if no explanation of long-term eosinophilia; Ivermectin (Albendazole alt) |

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| *Transmitted by* ***Bite*** *causing* ***Tissue****Infection* | | | | |  |  |  |
| Organism | Reservoir | Vector bitten by/ingested | Infecting Form | Key Sx | Diagnosis | Pictures | Treatments |
| Wuchereria bancrofti (Elephantiasis) | Tropical areas | Mosquito injects larvae | Larvae; become adults in lymphatics | Recurrent lymphangitis & filarial fever; hydrocele; Chyluria; Elephantiasis (legs/arms/scrotom/breasts) | Microfilariae in blood; Filairal antigen in blood (Kit); Eosinophilia & high IgE | N/A | Asymptomatic (Ivermectin; Diethylcarbamazine); Adenolymphangitis & fliariasis (Antihistamines, corticosteroids, Antibios for secondary infs.); Surgery |
| Onchocerca volvulus (River Blindness) | Africa, Central & S. America, & Middle East | (Simulium) Black fly injects larvae | Larvae; 2nd leading cause of blindness in world | Microfilariae die; subcutaneous nodules intenselt pruritic; itchy/ red eyes; visual loss (punctate keratitis); Leopard pigmentation of shins!; hanging groin | Microfilariae in skin biopsy; Diethylcarbamazine patch test (cutaneous reaction) | Ivermectin (rIvermectin); can be with corticosteroids; Doxycycline (endosymbiote Wolbacchia) |

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| **Wander Worms** |  |  |  |  |  |  |  |
| *Transmitted by* ***Ingestion*** *causing* ***Tissue****Infection* | | | | |  |  |  |
| Organism | Reservoir | Vector bitten by/ingested | Infecting Form | Key Sx | Diagnosis | Pictures | Treatments |
| Anisakis simplex | Infected fish | Larvae penetrate mucosal wall | Larvae | Violent abdominal pain, N/V; Mimic Crohn's Disease | Gastric exam & biopsy | N/A | Surgical/endoscopic removal |
| Toxocara cani/cati | Dogs & Cats | Ingest embryonated eggs | Embryonated eggs | Depend on tissue affected (Ocular = rare) | Eosinophilia & positive titers | Albendazole + antiinflammatories |
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| *Transmitted by* ***Contact*** *causing* ***Tissue****Infection* | | | | |  |  |  |
| Organism | Reservoir | Vector bitten by/ingested | Infecting Form | Key Sx | Diagnosis | Pictures | Treatments |
| Ancylostoma canium | Cats & Dogs | Rhabditiform larvae goes thru skin | Rhabditiform larvae | Intensely pruritic tract in dermis | Sxs | N/A | If severe = Albendazole, Ivermectin, sugerical removal |
| Ancylostoma braziliense |